Reintroduction of the Floreana Mockingbird *Mimus trifasciatus*

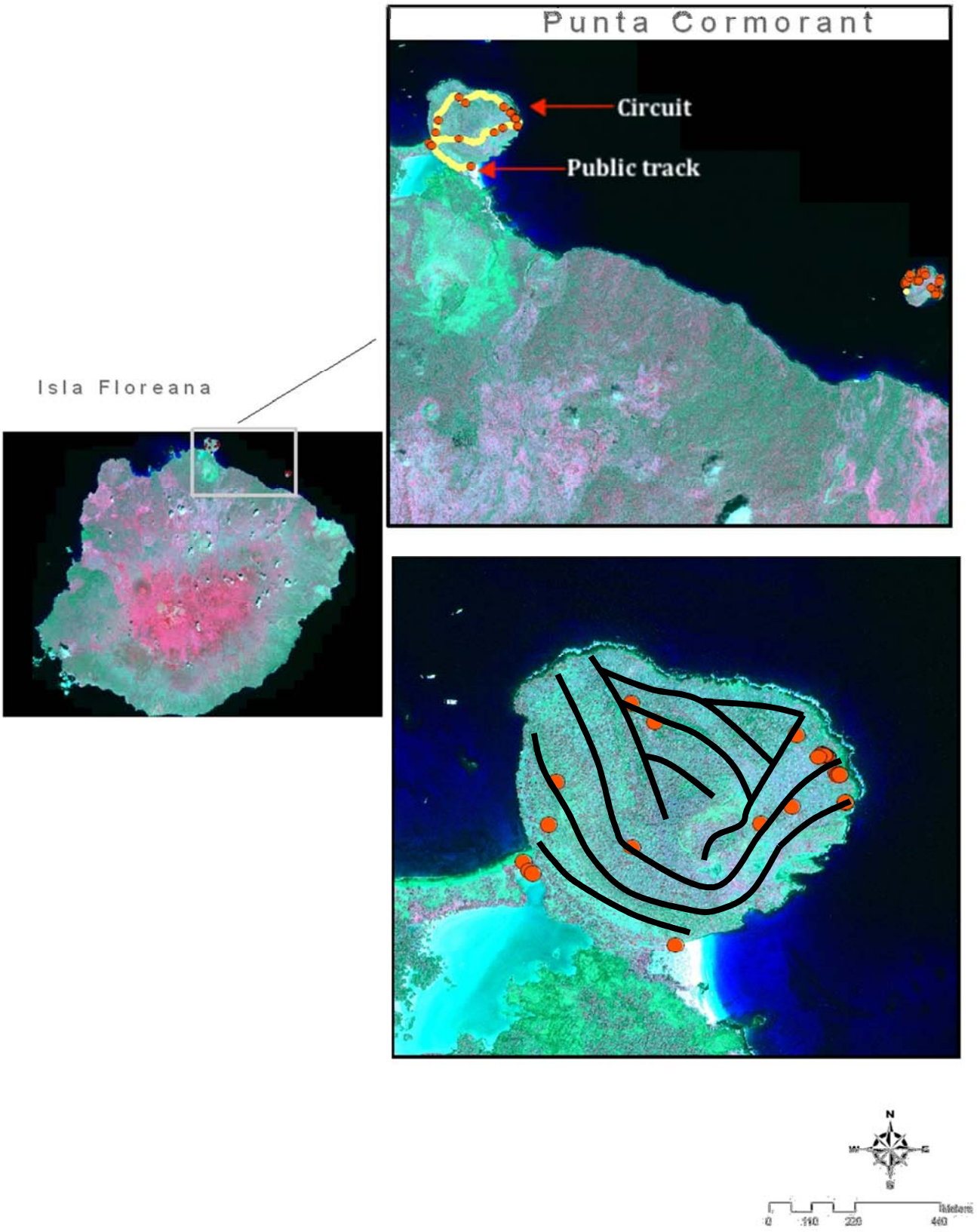
Principal Investigator: Luis Ortiz-Catedral
Reporting Period: 1-31 July and 1-31 August 2012

Luis Ortiz-Catedral with local kids from Floreana showing handling techniques for mockingbirds using stuffed toys. Photo: J. More

Objective 1. Visit to Punta Cormorant to characterize habitat with views towards estabishing an introduced predator control perimeter.

On 6th July, I was accompanied by Joanne Peace (professional volunteer at CDF) and visited Punta Cormorant, a 50ha site considered ideal to undertake rat and cat control to allow natural recolonization of Floreana mockingbirds from nearby Champion Islet (*c*. 4km away) or to translocate these birds after implementing cat/rat control eradication. A 2.7km circuit was made and the public track at the neck of the peninsula was walked to assess areas suitable for setting up pest control transects, grids, buffers, and perimeters. The wildlife and habitat present was also noted. Evidence of owls (two regurgitated pellets) was found close to the shore the pellets both contained rodent remains. Twenty-three cat scats were found and 21 of these were crushed to allow examination of the contents. Eighteen scats examined contained rodent parts, five contained vegetation (grass, seeds), four contained invertebrates (crab and insect exoskeleton, locust wing), and one contained a feather. Evidence from these cat scats found at Punta Comorant suggest that rats form a predominant part of the diet of the cats in this area. A flock of 12 smooth-billed anis (*Crotophaga ani*); known nest predators of Floreana mockingbirds, was observed in the north-western section of the plateau. Based on the features of the terrain, a potential network of tracks was outlined on a map.

Joanne Peace on Punta Cormorant, looking for cat scats and evidence of rats. Photos L. Ortiz-Catedral



Map of Floreana Island with inset of Punta Comorant showing the circuit and public track and potential trap/bait station track network. Map elaborated by A. Llerena, J. Peace and L. Ortiz-Catedral

Objective 2. Day visit to Champion Islet to continue with monitoring of ringed population and capture/ring last juveniles of the breeding season.

On 8th July, a team of four visited Champion Islet: Joanne Peace, Chema Murube, Ainoa Nieto and myself. A total of 58 Floreana mockingbirds were confirmed alive, including more than 10 juveniles from the 2012 breeding season. Champion Islet was noticeably drier at this time of the year and no signs of nest-building were noticed. Floreana mockingbirds were seen foraging on insects and berries of *Passiflora foetidisima* as well as *Cordia lutea.* A couple of juveniles remain unringed as they showed extreme caution when approached. In subsequent trips an effort will be made to catpture and ring these. The measurements of the juveniles captured are presented below.

Ring number	Colour rings	Weight	Head to Bill	Width	Depth	Tarsus	Wing	Tail
143483	BnM/B	62.00	57.30	6.70	7.00	42.50	122.00	121.00
143484	KM/B	58.00	58.00	7.00	6.90	36.40	121.00	115.00
143485	GM/G	54.00	54.50	5.40	6.40	32.00	116.00	116.00
143486	BM/G	66.00	58.40	7.40	6.00	42.80	121.00	114.00
143487	BnM/Gy	62.00	56.20	7.00	6.40	41.00	126.00	113.00
143488	GM/Bn	54.00	56.20	7.00	6.40	36.00	112.00	113.00
143489	KM/W	56.00	56.50	6.80	6.00	37.50	114.00	112.00
143490	GM/K	62.00	57.90	6.60	7.00	40.50	104.00	117.00
143491	BnM/G	56.00	57.50	6.4	6	40.00	112	110
143492	KM/Bn	54.00	55.00	6.6	6.5	37.00	112	110

Luis Ortiz-Catedral measuring one of 10 juveniles captured and ringed on Champion Islet. Photo: J. Peace

Objective 3. Eight day visit to Fernandina Island to provide support to the Galápagos National Park during a Land Iguana population estimate/tagging project.

Between 16-23 July I joined a team of 12 people including personnel from the Galápagos National Park and Charles Darwin Foundation visiting Fernandina Island with the goal of conducting visual counts of land iguanas (*Conolophus subcristatus*) as well as capturing, measuring and tagging adult and sub-adult iguanas. During four days we captured and measured 116 adult land iguanas. We also applied PIT tags to these and evaluated their health in the field. Given their high visibility and high survival, land iguana numbers could be estimated using the mark-recapture methodology currently used for Floreana mockingbirds. This aspect was discussed at length with personnel from the Galápagos National Park and trials for its implementation are underway.

Luis Ortiz-Catedral applying a PIT tag and weighing a land iguana on Fernandina Island. Photos: J. More

Objective 4. Five day visit to Gardner Islet to continue with monitoring of ringed population of Floreana mockingbirds.

Between 29th July and 3rd August, Jono More (professional volunteer) and myself visited Gardner Islet with the goal of replacing plastic rings for coloured ionised metal rings. Also we aimed tp capture and ring juveniles from the 2012 breeding season and to conduct a census. Gardner was dry, however, heavy showers happened towards the end of our trip, which prevented the census. Nevertheless, we confirmed 98 individuals alive via sightings of ringed birds as well as captures and of these 10 were juveniles from the 2012 breeding season. No signs of nest-building were noticed. The measurements of those juveniles captured are presented below.

Ring number	Colour rings	Weight	Head to Bill	Width	Depth	Tarsus	Wing	Tail
143493	MuP/MO	62.00	56.1	7	6.7	40.40	121	106
143494	GK/M	56.00	56.00	7.1	6	39.50	111	107
143495	AY/M	58.00	57.60	6	6.2	39.20	116	113
143496	OY/BnM	56.00	56.80	6.4	6.5	40.10	113	103
143497	MuB/M	62.00	55.80	6	5.9	38.50	111	106
143498	MuBn/MMu	62.00	56.40	7	6.6	37.60	119	108
143499	OBn/M	60.00	56.80	5.5	5.6	39.30	116	111
143500	MuK/M	70.00	60.70	7.6	6.4	41.10	126	121
143701	KGy/JM	66.00	58.00	7	6	38.30	116	112
143702	KGy/MJ	62.00	58.40	6.6	6	40.00	124	109

One of 98 Floreana mockingbirds confirmed alive on Gardner Islet. Photo: L. Ortiz-Catedral.

Objective 5. Participate in the education campaign "The voyage that change the world" with the local community of Floreana Island.

Between 27-28 July, I participated in educational activities with a group of 30 local children from Floreana Island. These activities were part of a project coordinated by Christina Georgii (CDF). In particular I held a mini-workshop showing field techniques to capture, measure and ring mockingbirds using stuffed toys. Also, I talked to the kids about the importance of studying Floreana mockingbirds and the reasons why they have dissapeared from Floreana Island. Later, during the evening I gave a talk to the whole community of Floreana which was well received and enticed multiple questions from the audience. The following day a group of 30 children visited Champion on a boat. From the boat we sighted Floreana mockingbirds and other wildlife associated with them. This was an important and rewarding visit as it was the first time all of the kids saw the rare Floreana mockingbird.

Luis Ortiz-Catedral showing the way Floreana mockingbirds are measured in the field using "Mario" one the stuffed toys.
Photo: J. More

Objective 6. Identify and help implement mitigation techniques for non-target species and implement control programme for invasive birds

During August a number of meetings were held with the Galápagos National Park to discuss mitigation alternatives for non-target species that might be affected during a bait drop operation on Pinzon Island later this year. In particular, mitigation alternatives for Galápagos Hawks (*Buteo galapagoensis*) have been addressed. This component is led by Francesca Cunninghame (Durrell, CDF). Also, mitigation options for land iguanas and Galápagos snails have been discussed and are currently being prepared in a draft document. These actions are relevant to the Floreana mockingbird project as it is likely that a large-scale rodent/cat eradication programme will take place on Floreana Island some time in the future, thus identifying key elements for the management of native species will help in putting together a tentative plan for Floreana Island.

Lastly, meetings have been held discussing the implementation of a project aimed at controling the invasive smooth-billed ani (*Crotophaga ani*). Smooth-billed anis were introduced from the mainland in the 1970s and now occur on most islands of the Galápagos archipelago. They are known predators of nestlings of various bird species, including, presumanbly Floreana mockingbirds. Identifying the most efficeint control method for this species will thus benefit the Floreana mockingbird project.

Smooth-billed ani: an introduced bird species that potentially preys on Floreana mockingbird nests and other native Galápagos birds. Photo: L. Ortiz-Catedral

From left: Joanne Peace, Ainoa Nieto, Luis-Ortiz Catedral and Chema Murube, the team that visited Champion Islet during July. Photo: L. Ortiz-Catedral

Reintroduction of the Floreana Mockingbird *Mimus trifasciatus* is funded by:

Galapagos Conservation Trust

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Lindblad Expeditions | National Geographic

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Association Suisse des amis des Iles Galapagos
Swiss Association of friends of the Galapagos Islands

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Professor Richard Dawkins and Lalla Ward